

What is claimed is:

1. A method for interleaving bits of a digital signal representative of data and/or audio in a digital audio broadcasting system, the method comprising the step of:  
writing a plurality of bits of the digital signal to a matrix; and  
reading the bits from the matrix, wherein at least one of the writing and reading steps follows a non-sequential addressing scheme.
2. The method of claim 1, wherein the number of bits in the matrix is equal to the number of bits in a transfer frame of the digital signal.
3. The method of claim 1, wherein the bits in the matrix are arranged in a plurality of partitions.
4. The method of claim 3, wherein each of the partitions comprises a plurality of blocks.
5. The method of claim 3, wherein each of the partitions includes a group of the bits representative of a logical channel.
6. The method of claim 5, wherein the bits in each logical channel are scrambled.
7. A method of broadcasting digital information representative of data and/or audio in a digital audio broadcasting system, the method comprising the steps of:  
receiving a plurality of bits of a digital signal to be transmitted;  
writing the bits to a matrix;  
reading the bits from the matrix, wherein at least one of the writing and reading steps follows a non-sequential addressing scheme;  
mapping the bits to a plurality of carrier signals; and  
transmitting the carrier signals.
8. The method of claim 7, wherein the number of bits in the matrix is equal to the number of bits in a transfer frame of the digital signal.
9. The method of claim 7, wherein the bits in the matrix are arranged in a plurality of partitions.
10. The method of claim 9, wherein each of the partitions comprises a plurality of blocks.
11. The method of claim 9, wherein each of the partitions includes a group of the bits representative of a logical channel.

12. The method of claim 11, wherein the bits in each logical channel are scrambled.

13. The method of claim 7, further comprising the step of:  
channel coding the bits prior to the step of writing the bits of the digital signal to the matrix.

14. The method of claim 7, further comprising the step of:  
scrambling the bits prior to the step of writing the bits of the digital signal to the matrix.

15. An apparatus for interleaving bits of a digital signal representative of data and/or audio in a digital audio broadcasting system, the apparatus comprising:

means for receiving a plurality of bits of a digital signal to be transmitted;

means for writing the bits to a matrix; and

means for reading the bits from the matrix, wherein at least one of the means for writing and the means for reading follows a non-sequential addressing scheme.

16. The apparatus of claim 15, wherein the number of bits in the matrix is equal to the number of bits in a transfer frame of the digital signal.

17. The apparatus of claim 15, wherein the bits in the matrix are arranged in a plurality of partitions.

18. The apparatus of claim 17, wherein each of the partitions comprises a plurality of blocks.

19. The apparatus of claim 17, wherein each of the partitions includes a group of the bits representative of a logical channel.

20. The apparatus of claim 19, wherein the bits in each logical channel are scrambled.

21. An apparatus of broadcasting digital information representative of data and/or audio in a digital audio broadcasting system, the apparatus comprising:

means for receiving a plurality of bits of a digital signal to be transmitted;

means for writing the bits of the digital signal to a matrix;

means for reading the bits from the matrix, wherein at least one of the means for writing and the means for reading follows a non-sequential addressing scheme;

means for mapping the bits to a plurality of carrier signals; and

means for transmitting the carrier signals.

22. The apparatus of claim 21, wherein the number of bits in the matrix is equal to the number of bits in one of the transfer frames.

23. The apparatus of claim 21, wherein the bits in the matrix are arranged in a plurality of partitions.

24. The apparatus of claim 21, wherein each of the partitions comprises a plurality of blocks.

25. The apparatus of claim 21, wherein each of the partitions includes a group of the bits representative of a logical channel.

26. The apparatus of claim 25, wherein the bits in each logical channel are scrambled.

27. The apparatus of claim 21, further comprising:  
means for channel coding the bits prior to the step of writing the bits of the digital signal to the matrix.

28. The apparatus of claim 21, further comprising:  
means for scrambling the bits prior to the step of writing the bits of the digital signal to the matrix.

29. A method for deinterleaving received bits of a digital signal representative of data and/or audio in a digital audio broadcasting system, the method comprising the steps of:

writing a plurality of received bits of the digital signal to a matrix; and  
reading the bits from the matrix, wherein at least one of the writing and reading steps follows a non-sequential addressing scheme.

30. The method of claim 29, wherein the number of bits in the matrix is equal to the number of bits in a transfer frame of the digital signal.

31. A method of receiving digital information representative of data and/or audio in a digital audio broadcasting system, the method comprising the steps of:

receiving a plurality of bits of a digital signal;  
writing the bits to a matrix;  
reading the bits from the matrix, wherein at least one of the means for writing and means for reading follows a non-sequential addressing scheme; and  
using the read bits to produce an output signal.

32. The method of claim 31, wherein the number of bits in the matrix is equal to the number of bits in a transfer frame of the digital signal.

33. An apparatus for deinterleaving bits of a digital signal representative of data and/or audio in a digital audio broadcasting system, the apparatus comprising:

means for receiving a plurality of bits of a digital signal;

means for writing the bits to a matrix; and

means for reading the bits from the matrix, wherein at least one of the means for writing and means for reading follows a non-sequential addressing scheme.

34. The apparatus of claim 33, wherein the number of bits in the matrix is equal to the number of bits in a transfer frame of the digital signal.

35. An apparatus for receiving digital information representative of data and/or audio in a digital audio broadcasting system, the apparatus comprising:

means for receiving a plurality of bits of a digital signal;

means for writing the bits of the digital signal to a matrix;

means for reading the bits from the matrix, wherein at least one of the means for writing and means for reading follows a non-sequential addressing scheme; and

means for using the read bits to produce an output signal.

36. The apparatus of claim 35, wherein the number of bits in the matrix is equal to the number of bits in one of the transfer frames.